

out reading it. No one will read it without feeling how just and well-timed was the editorial published in the February number of this journal on "the dangers of modern operative procedures for the radical cure of hernia."

The book should be studied by every surgeon about to practice in India.

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PETIT TRAITÉ SUR LES HERNIES. Par PIERRE FRANCO, Chirurgien de Lausanne. Réimpression identique au texte primitif. (Première édition, 1556.) Alcan. Paris. Gr. in-8. Extrait de la *Revue de Chirurgie*.

Born at Turriers, in Provence, at the end of the 15th or beginning of the 16th century, Pierre Franco ventured upon the practice of the art of surgery, in Lausanne, in Berne, Switzerland, and in 1556, as the fruit of thirty years of practice, he produced his *Petit Traité contenant une des parties principales de chirurgie. Laquelle les Chirurgiens hernières exercent ainsi qu'il est montre en la page suivante. Fait par Pierre Franco, chirurgien de Lausanne*, originals of which are exceedingly rare. In it are presented the ideas and conceptions of Franco himself, with little regard to authority. His style is pleasing because of its simplicity of diction, and its honesty and sincerity. Holding no professor's chair, protected by no influential patron, not even possessing a university title, he was, perhaps, the best representative of the peripatetic operator of the 15th and 16th centuries, making frequent excursions into neighboring towns "for hernias, hare-lips and stones." He is said to have taught anatomy at Fribourg and at Lausanne in later years. A glimpse at his character is given in his dedication and preface, in which he states that his book is published for the benefit of "those who practice their profession with fidelity, and fail only from ignorance," and "to repress the arrogance of the quacks, who deserve to be punished by the magistrates as highwaymen, seeing that, under the pretence of giving aid, they torment their poor patients and cause them miserably to die."

Half of the work is occupied by his discussion of Hernia and its cure, whence arose, perhaps, the prevalent misconception that this first edition was simply a treatise on hernia. Under hernia he includes all scrotal and inguinal tumors—hydrocele, varicocele and humoral and gaseous tumors, and the ruptures properly called, intestinal and omental, and bubonocele. His operations for the relief of hernia proper are radical indeed. Using the word didymis for the "two tunics which envelope the spermatic vessels and their contents," he defines intestinal hernia as the descent of the intestines into the

scrotum; and after the patient has been "well purged under the direction of a physician," he makes an opening at the most dependent part of the scrotum, for drainage. The intestines having been returned—by taxis I infer—and kept back by an assistant pressing in the pubic region, the testicle was seized at the lower part of the scrotum and removed with as much as possible of the *didymis*. The stump was then firmly grasped by peculiar clamps, while a ligature was passed through the middle of the *didymis* just above the clamps, then, including half of the *didymis*, it was passed back and out upon the other side and the two ends tied. The clamps were then loosened, the stump cauterized and allowed to drop into the abdominal cavity, the ends of the ligature hanging from the wound. The parts were then bandaged with a compress over the pubis, and the patient allowed to recover. In case of severe inflammation and the formation of "bad humors, free openings should be made for drainage, and antidotes administered internally, lest "*the poison mount to the heart and suffocate it.*"

A second method, which has the great advantage of not requiring the removal of the testicle, consists in drawing the *didymis* through an incision at the superior part of the scrotum, dividing it into four equal parts and ligating the two middle ones, as in the preceding operation. A third method is similar to the second, except that the ligature is of gold wire, which is permitted to become encysted, since it is "a friend of nature, like lead."

Naturally his study of stone in the bladder is of particular interest, because it contains the first recorded account of the hypogastric operation. He opened with an account of the symptoms and medical treatment of lithiasis and the removal of urethral calculi. As symptoms he quoted simply a sense of weight at the pubis or perineum, with pain referred to the tip of the glans penis, and frequent erections, and perhaps a history of renal colic. He also described a metallic catheter, which he considered of value in suppression of urine, and as a means of diagnosis.

The ordinary method of operating required, according to Franco, the patient first to jump two or three times, to jar the stone down; then being held in the lithotomy position, which is minutely described, the operator introduced the fingers of one hand into his "fundament," and pressed upon the lower portion of the abdomen with the other, thus forcing the stone to the neck of the bladder; this done, an incision was made between the "fundament" and the testicles, two or three fingers breadth long and about an inch on one side of the commissure of the perineum. The operator cut very gently down to the stone and

cut the neck of the bladder upon the stone, holding it firmly from the rectum. The stone was then seized with the forceps or crotchet and drawn out. Franco never stitched the wound, finding it sufficient to draw the legs together. If inflammation of the bladder arose, he injected a " decoction of mallows, violets, roses, chamomile and similar things, adding what might be desired of oil of violets, roses, lilies, scorpions, and the like." If any stone still remained, he advised to inject the blood of a newly killed goat, which " has the faculty of easing pain and dissolving the stone" as well.

A second method, which he describes as the *grosse fermente*, is done with the aid of a grooved sound for guiding the point of the knife; into the incision thus made and guided by the groove was introduced a gorget—*gorgeret*—and upon it strong forceps, called *grosse fermente*, were introduced, the gorget withdrawn, the stone firmly grasped with the forceps and extracted. If the stone was very large, he considered its extraction very dangerous and preferred a method of his own invention, which he described as " Another Method of Extracting Stone, incomparably better than Any Other, since It is without Danger and Great Pain, devised by the Author."

The peculiarity of this operation was that it was done in two parts on different days. The incision was made, and if the stone was small and presented itself at the opening, it was removed at once and the operation completed. If it were large, or did not present itself at the opening, the patient was allowed to rest and recuperate for a day or two. Then the stone was extracted with the forceps, if small; if not, it was broken with cutting forceps, which he had devised, and extracted piece-meal.

He, in common with his contemporaries, held that incision of the body of the bladder would be almost necessarily fatal, and warned surgeons to confine their incisions to the neck of the bladder, and it was not until twenty years later that Rousset dared, the first, to maintain that the supra-pubic method for cystotomy was no more dangerous than the others. Franco, however, is acknowledged to have originated the supra-pubic procedure, although he advised surgeons not to adopt it. His case—the earliest known case of supra-pubic lithotomy—he relates as follows:

" It occurred once that I wished to remove a stone from a child of ten years or so, but in spite of all my efforts, I could not bring it down to the neck of the bladder. In view of that fact, that the patient was very much exhausted by his sufferings, and that the parents desired rather that he should die than live in such agony; also that I did not wish it to be a reproach to me that it should not be extracted; although

it was foolish, I decided to cut the bladder from the pubis, a little to the left. This I did, cutting upon the stone, which I had raised up with my fingers inserted in the fundament and held under control with the hand of an assistant, who compressed the abdomen into the pelvis: and in this way I extracted it. The stone was as large as an egg. Nevertheless, the wound consolidated and was healed. However, I would not advise anybody to do this, but rather to use the procedure devised by us, of which we have spoken."

Time had, until recently, little varied the mode of extracting stone from the female bladder from the methods taught by Franco. Were the stone small it was extracted through the urethra, which could be dilated to admit the finger; if large, he withdrew it through an incision made into the neck of the bladder from the vagina.

He devoted considerable space to a description of his method of couching for cataract and to a discussion of the difference between hard and soft cataract. His procedure was simply to force the lens backward and downward into the vitreous with a needle, directing that when pushed back, it should be held there "during the time of saying the Lord's prayer two or three times or more, as would seem expedient."

In opening his section on hare-lip, he fulminates his belief that the opinion that "what God has given from birth cannot be cured, is not only wrong but heretical, as says Guido. I have cured many by the help of the Lord: wherefore I will show how one must needs proceed." The method preferred by him, was, after having freshened the edges of the fissure, to draw them together with two triangular pieces of sticking plaster, so as to bring the edges in apposition and stitching the pieces together. Another method was by passing needles through the flaps in the manner of hare-lip pins.

His chapter on the "Manner of Extirpating an Arm or Leg" is very brief, including directions as to the mode of placing and fastening the patient to the table and to encircle the limb tightly with a band an inch or two above the proposed point of incision. He performed the circular operation, preventing hemorrhage with the actual cautery or boiling oil. Then, with a chapter on *Luppies* or wens, he closes his account of 'those things of which, from his experience, he considered himself especially qualified to speak.'

Of this work the first edition was issued from the press of Antoine Vincent at Lyons in 1556; an enlarged and revised edition in 1561; and in 1884 a reprint of the first edition was issued by the editors of the *Revue de Chirurgie* of Paris, to whom is due the cordial acknowledgments of the student of history of medicine for making this treasure available.

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